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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,380	11/14/2001	Masaaki Mimura	TOTO0004-US	6700

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EXAMINER

PHAM, HAI CHI

ART UNIT PAPER NUMBER

2861

DATE MAILED: 04/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/987,380

Applicant(s)

MIMURA ET AL.

Examiner

Hai C Pham

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other: .

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

2. Claim 3 is objected to because of the following informalities:
 - Line 7, "PVD" should read --physical vapor deposition (PVD)--.Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 10 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10:

- The phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 11 is dependent from claim 10 above, and is therefore indefinite.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

7. Claims 1 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Bethune et al. (U.S. Pub No. 2001/0054564 A1).

Bethune et al. discloses a method for forming a mark by forming a plural plating layers (at least n superposed layers of metal, where $n \geq 2$) on a base (support 2), the

layers being a combination of a nickel plating layer (10) and a chromium plating layer (12) formed thereon, removing the upper chromium layer (Fig. 2B) and revealing the color of the lower nickel plating layer so as to display a colored mark based on the difference in colors between the different metallic layers (see paragraphs 0027, 0048).

With regard to claim 14, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

8. Claims 1 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Omizo (U.S. 6,400,037 B1).

Omizo discloses a conventional method for forming a mark by forming plural plating layers (nickel plating layer over a copper layer) on a base (semiconductor device), removing the upper plating layer (nickel) by laser marking, thereby revealing the color of the lower plating layer (copper) so as to display a colored mark (see background of the Invention section).

With regard to claim 14, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bethune et al. in view of Wojnarowski et al. (U.S. 5,104,480).

Bethune et al. discloses all the basic limitations of the claimed invention except for the thickness of each of the metallic layers, the additional titanium layer overlaying the chromium/nickel layers.

Wojnarowski et al. discloses a method of direct patterning of metals comprising providing a plural plating layers including a lower nickel layer (112) followed by the copper layer (114) and the titanium layer (116), the metallic layers being deposited by thermal evaporation, removing the upper layers (114 and 116), and revealing the lower layer (112) (Fig. 15) to form a mark, wherein each layer has a certain thickness dictated by the type and power of the laser being used.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the device of Bethune et al. with the aforementioned teachings of Wojnarowski et al. The motivation for combining would have been to provide an adequate thickness to the application and effective with the dedicated laser.

Although the combined prior arts do not disclose the claimed thickness range of each of the metallic layers, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select the proper thickness range for the metallic layers, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

With regard to claim 4, Bethune et al. further teaches a variety of metals or alloys that can be used for the metallic layers depending on the desired colors, appearance or contrast (see paragraph 0023).

11. Claims 5-8, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bethune et al. in view of Naoi et al. (JP 4 218683).

Bethune et al. discloses all the basic limitations of the claimed invention except for the application of another plating layer to the mark portion to form a mark, and the insertion of ink or paint in the portion of mark to form the mark.

Naoi et al. discloses a multicolored ornament made by forming plural layers on the surface of the ornament by CVD or PVD method, removing the plating layers to form a mark portion, and providing another plating layer or paint on the mark portion to form the multicolored mark.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the device of Bethune et al. with the

aforementioned teachings of Naoi et al. The motivation for the combination would have been to provide the desired colors to the mark.

Although the combined prior arts do not disclose the claimed thickness range of each of the metallic layers, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select the proper thickness range for the metallic layers, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

12. Claims 9-11, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bethune et al. in view of Naoi et al. and Yamada et al. (JP 1 58540).

Bethune et al. discloses all the basic limitations of the claimed invention except for the application of ink or paint in the portion of mark to form the mark and the use of a mask.

Naoi et al. discloses a multicolored ornament made by forming plural layers on the surface of the ornament by CVD or PVD method, removing the plating layers to form a mark portion, and providing another plating layer or paint on the mark portion to form the multicolored mark.

Yamada et al. discloses the provision of a mask (13) through which the laser beam is focused on the surface to be decorated to remove the unnecessary part of the film layer (15).

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It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the device of Bethune et al. with the teachings of Naoi et al. and Yamada et al. The motivation for the combination would have been to help generate a sharp cut through the plating layers.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C Pham whose telephone number is (703) 308-1281. The examiner can normally be reached on T-F (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin R. Fuller can be reached on (703) 308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722, (703) 308-7724, (703) 308-7382, (703) 305-3431, (703) 305-3432 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



HAI PHAM
PRIMARY EXAMINER

April 4, 2003